

What is claimed is:

1. A coating method, comprising:

coating plural layers simultaneously on a continuously moving support by flowing out simultaneously plural coating liquids from plural slits, wherein at least one of the plural coating liquids contains a volatile solvent;

stopping the coating step; and

flowing out a solution containing a solvent having a boiling point higher than that of a main solvent of a coating liquid from a slit for an uppermost layer of the plural layers while stopping the coating step.

2. The coating method of claim 1, wherein the solvent is one of a single solvent and a mixture of plural solvents.

3. The coating method of claim 1, wherein a flow of the solvent satisfies the following formula:

$$W \times 50 \leq Q \leq W \times 5000$$

where Q is a flow quantity (ml/min) of the solvent and W is a coating width (m).

4. The coating method of claim 1, wherein a surface wind velocity at a position where the coating liquid flows is 3 m/sec or less.

5. The coating method of claim 1, wherein the coating method is one of a slide bead coating method and a curtain coating method and wherein when the coating liquid containing the volatile solvent has a viscosity of 200 mPa·s or more and a coating liquid of the lowermost layer has a viscosity of 0.5 to 100 mPa·s, a minimum wet layer thickness of the lowermost layer is thicker than a thickness obtained by the following formula:

$$Y = 0.0005X^2 + 0.0858X + 1.75$$

where Y is a wet layer thickness (μm) of the lowermost layer and X is a viscosity (mPa·s) of the lowermost layer.

6. The coating method of claim 5, wherein when the coating liquid containing the volatile solvent has a viscosity of 200 mPa·s or more, plural coating liquids are sequentially fed from a lowermost layer coating liquid to an uppermost layer into the plural slits.

7. The coating method of claim 6, wherein a feeding quantity of the lowermost layer coating liquid is larger than that of an upper layer coating liquid.

8. The coating method of claim 6, wherein a feeding speed of the lowermost layer coating liquid is slower than that of an upper layer coating liquid.

9. A slide bead coating method, comprising:

coating plural layers simultaneously on a continuously moving support by flowing out simultaneously plural coating liquids from plural slits of a slide coater, wherein at least one of the plural coating liquids contains a volatile solvent and has a viscosity of 200 mPa·s or more; and

setting a bead gap (μm) within a range of a minimum gap B_{min} to a maximum gap B_{max} when a coating speed A is 5 to 50 (m/min), where the minimum gap B_{min} and maximum gap B_{max} are obtained by the following formulas:

$$B_{\text{min}} = 58 \cdot \log_e A$$

$$B_{\text{max}} = 185 \cdot \log_e A - 100$$

10. The slide bead coating method of claim 9, wherein the optimum value B_{opt} of the bead gap is obtained by the following formula:

$$B_{opt} = 60 \cdot \log_e A + 60$$

11. The slide bead coating method of claim 9, wherein the slide coater comprises a slide surface and width regulating plates provided at both sides of the slide surface and wherein the slide surface is located in close proximity to a coated surface of the continuously moving support with a slide angle θ_α to the coated surface, a tip end of each of the width regulating plates is slanted with a tip end angle θ_t to the slide surface, an inner side surface of each of the width regulating plates is slanted with an inner side angle θ_i to the slide surface and the following formulas are satisfied:

$$(\theta_\alpha - 40)^\circ \leq \theta_t \leq (\theta_\alpha - 5)^\circ$$

$$\theta_t \leq \theta_i \leq 90^\circ$$

12. The slide bead coating method of claim 11, wherein the edge of the tip end of the width regulating plates and the edge of the slide surface are positioned on the same straight line.

13. The slide bead coating method of claim 9, wherein the slide coater further comprises plural reduced-pressure chambers to apply a reduced-pressure to an entire bead toward an upstream side in a moving direction of the support.